

NC Feasibility Studies

Upon NCDPI's request, EVAAS analyzed the following new and ongoing tests to determine whether they are feasible for value-added reporting.

- mCLASS Text Reading and Comprehension (TRC)
- Career and Technical Education (CTE) Post-Assessments
- North Carolina Final Exams (NCFE)

mCLASS Text Reading and Comprehension

TRC is a computer-based assessment that uses stopping rules to determine a student's reading level. TRC provides a Final Story Details Book Level for each of the following benchmark periods:

- Beginning of Year (BOY)
- Middle of Year (MOY)
- End of Year (EOY)

Although book levels are not numeric, they describe the level of reading and comprehension mastery and attainment for each student tested during these benchmark periods. Using the relative magnitudes of attainment, EVAAS converts these book levels to a numeric, intra-benchmark period normal curve equivalent (NCE) scale, and then aggregates scores at the district, school, and teacher levels. Then a gain-based methodology (known as the MRM methodology) can be used to determine the amount of movement from

- MOY to EOY for Kindergartners,
- BOY to EOY for 1st graders, and
- BOY to EOY for 2nd graders

Leveraging the gain-based methodology enables consistent reporting approaches at K-2 and 3-8 grade levels, as this methodology is used for End of Grade (EOG) Math and Reading reporting. On the EVAAS website, the BOY benchmark period will be shown as fall, MOY will be shown as winter, and EOY will be shown as spring.

The results from the gain-based methodology for TRC were examined to see if discernible differences between the entities were detectable. Furthermore, growth measures were examined specific to demographic and socioeconomic factors to assess any relationships that may exist. Due to the efficacy the gain-based methodology provides for TRC reporting, SAS has recommended moving forward with this approach.

CTE Post-Assessments and North Carolina Final Exams

CTE Post-Assessments and NCFEs use the same predictive methodology (known as the URM methodology) that is currently used with EOG Science and End of Course (EOC) assessments. This modeling approach predicts where each student is likely to score based on his/her own testing history and how students with similar testing histories performed under the average schooling experience. The difference between a predicted score and an actual score is attributable to the student's learning experience. These differences are aggregated to determine the effect of the district, school, and teachers involved in students' progress.

EVAAS considers several factors when implementing the predictive methodology.

- The entering achievement of students must be predictable and consistent. Currently, EOC and EOG assessments are used as predictors for CTE Post-Assessments and NCFEs. Lower-level CTE Post-Assessments are used as predictors for higher-level CTE Post-Assessments (for example, Accounting I may be used to predict Accounting II). Consistent relationships must exist between these tests in order to have sufficient predictability. Moving forward, other NCFEs will be examined for inclusion as predictors of other NCFEs. This will likely improve the overall predictability of certain assessments and add some assessments to the list that are recommended for value-added.
- Typically, differences between each entity (district, school, and teacher) are discernible and measureable from the average entity such that those who do not meet the expected amount of growth or those who exceed the expected amount of growth are detectably different than the average. The lack of measurable differences could be due to several factors, such as similarity in student progress among the different districts, schools and teachers or due to insufficient alignment between the assessment and curriculum/instruction taught in the districts, schools and classrooms. Regardless of the reason, SAS does not recommend that value-added measures are provided for these assessments at this time.
- A sufficient number of districts, schools, teachers, and students must be testing in the subject.

The results of the CTE Post-Assessment and NCFE feasibility study are summarized in the following table.

Test	Subject	Grade	Notes	Providing Value-Added For		
				Districts	Schools	Teachers
CTE Post-Assessment	Accounting I			Y	Y	Y
CTE Post-Assessment	Accounting II		Low Predictability	N	N	N
CTE Post-Assessment	Agricultural Mechanics I			Y	Y	Y
CTE Post-Assessment	Agricultural Mechanics II			Y	Y	Y
CTE Post-Assessment	Agricultural Mechanics II - Small Engines		In Pilot/Field Test	N	N	N
CTE Post-Assessment	Agricultural Production I			Y	Y	Y
CTE Post-Assessment	Agricultural Production II		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Agriscience Applications			Y	Y	Y
CTE Post-Assessment	Animal Science I			Y	Y	Y
CTE Post-Assessment	Animal Science II		Little Discernible Differences at the District Level	N	Y	Y
CTE Post-Assessment	Animal Science II - Small Animal			Y	Y	Y
CTE Post-Assessment	Apparel I			Y	Y	Y
CTE Post-Assessment	Apparel II Enterprise		Little Discernible Differences in Entities	N	N	N
CTE Post-Assessment	Automotive Brakes		Low Predictability	N	N	N
CTE Post-Assessment	Automotive Computer System Diagnostics		Low Predictability	N	N	N
CTE Post-Assessment	Biomedical Technology			Y	Y	Y
CTE Post-Assessment	Biotechnology and Agriscience Research I			Y	Y	Y
CTE Post-Assessment	Biotechnology and Agriscience Research II		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Business Law		In Pilot/Field Test	N	N	N
CTE Post-Assessment	Business Management		Little Discernible Differences in Entities	N	N	N
CTE Post-Assessment	Cabinetmaking I			Y	Y	Y
CTE Post-Assessment	Cabinetmaking II			Y	Y	Y
CTE Post-Assessment	Career Management		In Pilot/Field Test	N	N	N
CTE Post-Assessment	Carpentry I		Low Predictability	N	N	N
CTE Post-Assessment	Carpentry II		Low Predictability	N	N	N
CTE Post-Assessment	Carpentry III		Low Predictability	N	N	N
CTE Post-Assessment	Computer Engineering Technology I			Y	Y	Y
CTE Post-Assessment	Computer Engineering Technology II		Low Predictability	N	N	N
CTE Post-Assessment	Computer Programming I			Y	Y	Y

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				Districts	Schools	Teachers
CTE Post-Assessment	Core and Sustainable Construction		Low Predictability	N	N	N
CTE Post-Assessment	Culinary Arts and Hospitality I			Y	Y	Y
CTE Post-Assessment	Culinary Arts and Hospitality II		Little Discernible Differences in Entities	N	N	N
CTE Post-Assessment	Digital File Preparation		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Drafting-Architectural II			Y	Y	Y
CTE Post-Assessment	Drafting-Architectural III		Low Percentage of Scores Analyzed Due to Membership and Prior Testing Histories	N	N	N
CTE Post-Assessment	Drafting-Engineering II		Little Discernible Differences at the District Level	N	Y	Y
CTE Post-Assessment	Drafting-Engineering III		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Early Childhood Education I			Y	Y	Y
CTE Post-Assessment	Early Childhood Education II		Little Discernible Differences in Entities	N	N	N
CTE Post-Assessment	eCommerce I		Low Predictability	N	N	N
CTE Post-Assessment	Electrical Trades I		Low Predictability	N	N	N
CTE Post-Assessment	Electrical Trades II		Low Predictability	N	N	N
CTE Post-Assessment	Electronics I		Too Few Districts Receiving Reporting	N	Y	Y
CTE Post-Assessment	Electronics II		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Entrepreneurship I			Y	Y	Y
CTE Post-Assessment	Environmental and Natural Resources I			Y	Y	Y
CTE Post-Assessment	Environmental and Natural Resources II		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Equine Science I		Too Few Districts Receiving Reporting	N	Y	Y
CTE Post-Assessment	Equine Science II		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Fashion Merchandising			Y	Y	Y
CTE Post-Assessment	Fire Fighter Technology I		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Fire Fighter Technology II		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Fire Fighter Technology III		Low Predictability	N	N	N
CTE Post-Assessment	Foods I			Y	Y	Y
CTE Post-Assessment	Foods II - Enterprise			Y	Y	Y
CTE Post-Assessment	Foods II Technology		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Health Science I			Y	Y	Y
CTE Post-Assessment	Health Science II			Y	Y	Y

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Test	Subject	Grade	Notes	Providing Value-Added For		
				Districts	Schools	Teachers
CTE Post-Assessment	Health Team Relations			Y	Y	Y
CTE Post-Assessment	Horticulture I			Y	Y	Y
CTE Post-Assessment	Horticulture II			Y	Y	Y
CTE Post-Assessment	Horticulture II Landscaping		Low Predictability	N	N	N
CTE Post-Assessment	Horticulture II Turf Grass		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Hospitality and Tourism			Y	Y	Y
CTE Post-Assessment	Interior Applications		Low Predictability	N	N	N
CTE Post-Assessment	Interior Design I			Y	Y	Y
CTE Post-Assessment	Interior Design II		Little Discernible Differences at the District Level	N	Y	Y
CTE Post-Assessment	Introduction to Culinary Arts and Hospitality			Y	Y	Y
CTE Post-Assessment	Introduction to Graphic Communications		Low Predictability	N	N	N
CTE Post-Assessment	Marketing			Y	Y	Y
CTE Post-Assessment	Marketing Management		Little Discernible Differences in Entities	N	N	N
CTE Post-Assessment	Masonry I		Low Predictability	N	N	N
CTE Post-Assessment	Masonry II		Low Predictability	N	N	N
CTE Post-Assessment	Metals Manufacturing Technology I		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Metals Manufacturing Technology II		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Microsoft Word and Powerpoint		In Pilot / Field Test	N	N	N
CTE Post-Assessment	Multimedia and Webpage Design			Y	Y	Y
CTE Post-Assessment	Nursing Fundamentals		Low Predictability	N	N	N
CTE Post-Assessment	Parenting and Child Development			Y	Y	Y
CTE Post-Assessment	Personal Finance		In Pilot / Field Test	N	N	N
CTE Post-Assessment	Pharmacy Technician		Low Predictability	N	N	N
CTE Post-Assessment	Principles of Business and Finance			Y	Y	Y
CTE Post-Assessment	Principles of Technology I			Y	Y	Y
CTE Post-Assessment	Principles of Technology II		Too Few Districts and Schools Receiving Reporting	N	N	Y
CTE Post-Assessment	Print Advertising and Design		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Public Safety I			Y	Y	Y
CTE Post-Assessment	SAS Programming I		Too Few Entities Receiving Reporting	N	N	N
CTE Post-Assessment	Scientific and Technical Visualization I			Y	Y	Y

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Test	Subject	Grade	Notes	Providing Value-Added For		
				Districts	Schools	Teachers
CTE Post-Assessment	Scientific and Technical Visualization II		Too Few Districts Receiving Reporting	N	Y	Y
CTE Post-Assessment	Sports & Entertainment Marketing I		In Pilot/Field Test	N	N	N
CTE Post-Assessment	Strategic Marketing		Too Few Districts Receiving Reporting	N	Y	Y
CTE Post-Assessment	Technology Engineering and Design			Y	Y	Y
CTE Post-Assessment	Teen Living			Y	Y	Y
North Carolina Final	Advanced Functions and Modeling		Low Predictability	N	N	N
North Carolina Final	Algebra II			Y	Y	Y
North Carolina Final	American History I			Y	Y	Y
North Carolina Final	American History II			Y	Y	Y
North Carolina Final	Chemistry			Y	Y	Y
North Carolina Final	Civics and Economics			Y	Y	Y
North Carolina Final	Common Core Algebra II			Y	Y	Y
North Carolina Final	Common Core Geometry			Y	Y	Y
North Carolina Final	Common Core Integrated Mathematics III		Low Predictability	N	N	N
North Carolina Final	Discrete Mathematics		Low Predictability	N	N	N
North Carolina Final	Earth/Environmental Science			Y	Y	Y
North Carolina Final	English Language Arts I			Y	Y	Y
North Carolina Final	English Language Arts III		Little Discernible Differences in Entities	N	N	N
North Carolina Final	English Language Arts IV			Y	Y	Y
North Carolina Final	Geometry			Y	Y	Y
North Carolina Final	Math II		Low Predictability	N	N	N
North Carolina Final	Math III		Low Predictability	N	N	N
North Carolina Final	Physical Science			Y	Y	Y
North Carolina Final	Physics			Y	Y	Y
North Carolina Final	Pre-Calculus		Low Predictability	N	N	N
North Carolina Final	Science	4	Not Enough Predictors	N	N	N
North Carolina Final	Science	6		Y	Y	Y
North Carolina Final	Science	7		Y	Y	Y
North Carolina Final	Social Studies	4	Not Enough Predictors	N	N	N
North Carolina Final	Social Studies	5		Y	Y	Y

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Test	Subject	Grade	Notes	Providing Value-Added For		
				Districts	Schools	Teachers
North Carolina Final	Social Studies	6		Y	Y	Y
North Carolina Final	Social Studies	7		Y	Y	Y
North Carolina Final	Social Studies	8		Y	Y	Y
North Carolina Final	US History			Y	Y	Y
North Carolina Final	World History			Y	Y	Y

Evaluation Composite Measures

mCLASS TRC as well as CTE Post-Assessments and NCFEs that meet the criteria for value-added reporting will also be used in the calculation of Educator Effectiveness Evaluation Composites. These evaluation measures are a summative measure of educator impact for the 2013-14 school year. The Educator Effectiveness composite populates Standard 6 for teachers and Standard 8 for administrators on the NC Educator Evaluation System dashboard.